

2. ENERGY EVOLUTION: OTTAWA'S
COMMUNITY ENERGY TRANSITION STRATEGY, PHASE 1
- ÉVOLUTION ÉNERGÉTIQUE : STRATÉGIE DE TRANSITION
VERS DES TECHNOLOGIES ÉNERGÉTIQUES COMMUNAUTAIRES
D'OTTAWA, PHASE 1

COMMITTEE RECOMMENDATIONS

That Council:

- 1. Receive Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase 1 attached as Document 1.**
- 2. Direct staff to initiate the recommendations described in this report and summarized in Document 2.**
- 3. Direct staff to complete Phase 2 of the Energy Evolution Strategy that will include the transportation, buildings, waste streams and energy storage pathways, in collaboration with community partners.**
- 4. Direct staff to report back to Committee and Council on the status and implementation of Energy Evolution by Q1, 2019.**

RECOMMANDATIONS DU COMITÉ

Que le Conseil :

- 1. prenne acte du document *Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase 1* (Évolution énergétique : Stratégie de transition vers des technologies énergétiques communautaires d'Ottawa, phase 1), ci-joint en document 1;**
- 2. demande au personnel de commencer à appliquer les recommandations décrites dans le présent rapport et résumées dans le document 2;**

3. **demande au personnel d'exécuter la phase 2 de la stratégie *Évolution énergétique*, qui portera notamment sur les filières des transports, des bâtiments, des flux de déchets et du stockage d'énergie, en collaboration avec des partenaires communautaires.**
4. **demande au personnel de rendre compte au Comité et au Conseil de l'état et de la mise en œuvre de la stratégie *Évolution énergétique* d'ici le premier trimestre de 2019.**

DIRECTIONS TO STAFF:

1. That, prior to Council's consideration of this matter at its meeting of Wednesday, 13 December 2017, staff report back via memorandum to all members of Council, addressing the various points raised by the public which might be of concern or which might potentially be pursued at a subsequent phase of the Energy Evolution Strategy.
2. That staff report back to Committee and Council with an update on the status and implementation of Energy Evolution by Q2, 2018.

INSTRUCTIONS AU PERSONNEL

1. Que, d'ici à l'étude de la question par le Conseil à sa réunion du mercredi 13 décembre 2017, le personnel fasse rapport à tous les membres du Conseil au moyen d'une note de service traitant des différents points soulevés par la population pouvant être source de préoccupation ou auxquels il serait possible de donner suite à une étape ultérieure de la stratégie *Évolution énergétique*.
2. Que le personnel fasse, pour le Comité et le Conseil, une mise à jour sur l'état d'avancement et la mise en œuvre de la stratégie *Évolution énergétique* d'ici au deuxième trimestre de 2018.

DOCUMENTATION/DOCUMENTATION

1. Director's report, Economic Development and Long Range Planning, Planning, Infrastructure and Economic Development Department dated 14 November 2017 (ACS2017-PIE-EDP-0048)

Rapport du Directeur, Développement économique et planification a long terme, Direction générale de la planification, de l'infrastructure et du Développement économique daté le 14 novembre 2017 (ACS2017-PIE-EDP-0048).

2. Extract of Draft Minute, Environment and Climate Protection Committee, 21 November 2017.

Extrait de l'ébauche du procès-verbal du Comité de l'environnement et de la protection climatique, le 21 novembre 2017.

**ENVIRONMENT AND CLIMATE
PROTECTION COMMITTEE
REPORT 17
13 DECEMBER 2017**

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**COMITÉ DE L'ENVIRONNEMENT ET
DE LA PROTECTION CLIMATIQUE
RAPPORT 17
LE 13 DÉCEMBRE 2017**

**Report to
Rapport au:**

**Environment Committee
Comité de l'environnement
21 November 2017 / 21 novembre 2017**

**and Council
et au Conseil
13 December 2017 / 13 décembre 2017**

**Submitted on November 14, 2017
Soumis le 14 novembre 2017**

**Submitted by
Soumis par:
John Smit,
Director / Directeur,
Economic Development and Long Range Planning /
Planning, Infrastructure and Economic Development Department / Service de
planification, d'Infrastructure et de Développement économique**

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**Ward: CITY WIDE / À L'ÉCHELLE DE
LA VILLE**

File Number: ACS2017-PIE-EDP-0048

**SUBJECT: Energy Evolution: Ottawa's Community Energy Transition
Strategy, Phase 1**

**OBJET: Évolution énergétique : Stratégie de transition vers des
technologies énergétiques communautaires d'Ottawa, phase 1**

REPORT RECOMMENDATIONS

That Environment and Climate Protection Committee recommend Council:

- 1. Receive Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase 1 attached as Document 1.**
- 2. Direct staff to initiate the recommendations described in this report and summarized in Document 2.**
- 3. Direct staff to complete Phase 2 of the Energy Evolution Strategy that will include the transportation, buildings, waste streams and energy storage pathways, in collaboration with community partners.**
- 4. Direct staff to report back to Committee and Council on the status and implementation of Energy Evolution by Q1, 2019.**

RECOMMANDATIONS DU RAPPORT

Que le Comité de l'environnement et de la protection climatique recommande au Conseil :

1. de prendre acte du document *Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase 1* (Évolution énergétique : Stratégie de transition vers des technologies énergétiques communautaires d'Ottawa, phase 1), ci-joint en document 1;
2. de demander au personnel de commencer à appliquer les recommandations décrites dans le présent rapport et résumées dans le document 2;
3. de demander au personnel d'exécuter la phase 2 de la stratégie *Évolution énergétique*, qui portera notamment sur les filières des transports, des bâtiments, des flux de déchets et du stockage d'énergie, en collaboration avec des partenaires communautaires.
4. de demander au personnel de rendre compte au Comité et au Conseil de l'état et de la mise en œuvre de la stratégie *Évolution énergétique* d'ici le premier trimestre de 2019.

EXECUTIVE SUMMARY

Assumptions and Analysis

This report represents Phase 1 of Energy Evolution: Ottawa's Community Energy Transition Strategy. It is a three-year plan designed to manage energy consumption, promote the use of renewable energy and advance local economic development opportunities in Ottawa. Thirty-three initiatives that have been developed by community subject matter experts and staff that can be undertaken by the City and community partners between 2017 – 2020 have been identified (Document 2).

Energy Evolution is intended to be a multi-year strategy with specific deliverables for the short (2020), medium (2031) and long term (2050). Phase 2, beginning in 2018, will include the development of additional Pathway Studies and the identification of actions related to energy efficiency and conservation, particularly with regards to buildings and the transportation sector. It will also examine other areas associated with renewable energy such as energy from waste and energy storage. A more robust modeling and assessment will follow to help the City and its community partners determine where to

prioritize efforts over the medium and long term and will help to chart a longer term path towards a future where Ottawa is a thriving city powered by clean, renewable energy.

Financial Implications

Financial implications associated with the Community Energy Transition Strategy Actions are per the Resource Requirements within Document 2. Actions requiring Community, External, and/or Additional Resources will not proceed prior to securing the resource(s) identified.

Funding in the amount of \$500,000 to implement Action 30 is subject to Council approval through the 2018 Capital Budget, 909151 Community Energy Initiatives.

Public Consultation/Input

To facilitate collaboration between the municipality and community partners, staff has worked with interested Councillors, a Sounding Board, and both general and technical working groups. Leveraging these bodies, the project has engaged over 100 key stakeholders representing approximately 50 organizations in Ottawa. Inputs from these stakeholders have provided a great deal of both data and engagement.

The working groups have included some Sounding Board members but also technical experts from farther afield. A number of consultants were also engaged to provide background information and technical analysis necessary to develop Phase I.

With a focus on energy supply and distribution for Phase I, Phase 2 will re-align more closely with the building, transportation, governance and funding working groups and will include a significant engagement component with community partners in the development of the strategy. Targeted subject matter experts including consultants will be engaged throughout for their expertise. ESAC members will also be engaged at various stages to ensure their advice and feedback is considered as the project moves forward.

Résumé

Hypothèses et analyse

Le présent rapport traite de la phase 1 d'*Évolution énergétique : Stratégie de transition vers des technologies énergétiques communautaires d'Ottawa*, un plan triennal conçu

pour gérer la consommation d'énergie, promouvoir l'utilisation d'énergies renouvelables et favoriser les possibilités de développement économique local à Ottawa. Ont été recensées 33 initiatives créées par des experts en la matière d'Ottawa et des membres du personnel, que la Ville et ses partenaires communautaires pourront entreprendre entre 2017 et 2020 (document 2).

Évolution énergétique se veut une stratégie pluriannuelle assortie de livrables précis à court (2020), moyen (2031) et long terme (2050). Sa phase 2, qui débutera en 2018, consistera notamment à réaliser d'autres études sur les filières énergétiques et à trouver des mesures liées à l'efficacité énergétique et à la conservation de l'énergie, surtout en ce qui concerne les bâtiments et les transports. Elle portera aussi sur d'autres domaines associés à l'énergie renouvelable, comme la valorisation énergétique des déchets et le stockage d'énergie. Un exercice de modélisation et d'évaluation plus approfondi sera ensuite mené pour aider la Ville et ses partenaires communautaires à cibler leurs efforts à moyen et à long terme, et à bâtir, à plus long terme, un avenir où Ottawa sera une ville prospère alimentée par une énergie propre et renouvelable.

Répercussions financières

Les répercussions financières liées aux mesures de la Stratégie de la collectivité d'Ottawa pour la transition énergétique concordent avec les ressources nécessaires nommées dans le document 2. Les mesures nécessitant des ressources communautaires, externes ou additionnelles ne seront mises en œuvre que lorsqu'on se sera assuré de la disponibilité des ressources en question.

Le financement à hauteur de 500 000 \$ pour la mise en œuvre de la mesure n° 30 est assujéti à l'approbation du Conseil dans le cadre du budget des immobilisations de 2018, Initiatives énergétiques de la collectivité 909151.

Consultations publiques et commentaires

Pour faciliter la collaboration entre la Ville et ses partenaires communautaires, le personnel a travaillé avec les conseillers intéressés, un groupe de rétroaction et des groupes de travail généraux et techniques. Grâce à eux, le projet a mobilisé plus d'une centaine d'acteurs clés représentant environ 50 organisations d'Ottawa. Les

commentaires de ces acteurs se sont avérés très utiles, tant pour la collecte de données que pour les activités de consultation.

Les groupes de travail comprenaient des membres du groupe de rétroaction, mais aussi des experts techniques d'ailleurs. Un certain nombre d'experts-conseils ont aussi été appelés à fournir de l'information générale et des analyses techniques nécessaires à la réalisation de la phase 1.

Si la phase 1 porte surtout sur l'approvisionnement énergétique et la distribution de l'énergie, la phase 2 correspondra davantage aux activités des groupes de travail sur les bâtiments, les transports, la gouvernance et le financement, et comportera un important volet de consultation avec les partenaires communautaires pour l'élaboration de la stratégie. Certains experts en la matière choisis, y compris des experts-conseils, seront appelés à participer au processus. Les membres du Comité consultatif sur la gestion environnementale apporteront aussi leur concours à diverses étapes pour que leurs conseils et leurs commentaires soient pris en compte au fil de l'avancement du projet.

BACKGROUND

In 2015, Council approved Ottawa's Renewable Energy Strategy project as a 2015-2018 Term of Council priority and directed staff to:

Complete a baseline analysis of energy supply and demand within the City of Ottawa and assess options, in collaboration with community partners, for all such partners to advance energy conservation, energy efficiency and renewable energy generation within their respective areas of control/influence.

Early in 2016 City Council also approved a GHG reduction target for the City:

That the City continue to work with key stakeholders and community partners to reduce community-wide [greenhouse gases (GHGs)] produced within the geographic boundary of the City of Ottawa and pursue a new long-term GHG reduction target of 80 per cent below 2012 levels by 2050.

These directions are inseparable as they work in tandem to move Ottawa towards a low carbon economy. A renewable energy strategy is not just about energy and energy security, it is also about climate protection, ensuring a healthy environment for citizens,

building a strong economy and developing an overall resiliency that will enable Ottawa to retain its exceptional quality of life.

Work began in 2016 with collaboration of a 100+ member Sounding Board representing 50 organizations in Ottawa. They are individuals from local utilities, the federal government, the development industry, institutions, academia, the non-profit sector, and the private sector at large. Sounding Board members, and later targeted energy experts from this group and beyond, worked on the development of big ideas, naming the strategy *Energy Evolution*, developing a project vision and goals, and later developing business cases, policy opportunities and opportunities for further action. Inputs from these stakeholders have provided a great deal of both data and engagement in the development of the strategy to date.

Late in 2016, the project was transferred to the newly coined Planning, Infrastructure and Economic Development Department. An update on the development of Energy Evolution was provided to the Environment and Climate Protection Committee (ECPC) on February 21, 2017.

<http://app05.ottawa.ca/sirepub/mtgviewer.aspx?meetid=7077&doctype=AGENDA>

DISCUSSION

Energy Evolution: Ottawa's Community Energy Transition Strategy

Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase 1 is a three-year plan designed to manage energy consumption, promote the use of renewable energy and advance local economic development opportunities in Ottawa. Developed in collaboration with dozens of local businesses and organizations that form the Sounding Board and working groups, the strategy is a community-wide initiative. The vision for the project established by the Sounding Board is to transform Ottawa into a thriving city powered by clean, renewable energy.

Given the range of energy types currently used within Ottawa and the ways in which these are consumed, realizing this vision will require concerted efforts and collaboration across all sectors of the community to reduce the city's current dependence on fossil fuels. The approach adopted by the Energy Evolution strategy to guide this transition is three-pronged:

- reduce energy use through conservation and efficiency;
- increase the supply of renewable energy through local and regional production;
and
- prioritize the procurement of clean, renewable energy.

As an economic development strategy, Energy Evolution also aims to promote Ottawa as a center for innovation, research and technology development. The strategy establishes clear linkages to the City's *Smart Cities 2.0 Strategy* and aligns with the City's updated *Economic Development Strategy* in terms of fostering innovation, entrepreneurship and small-business development.

In addition to advancing climate change and sustainability objectives, a local renewable energy strategy can directly support efforts to promote innovation, entrepreneurship and technology development in Ottawa—key objectives of the City's updated Economic Development Strategy and Innovation Pilot Program.¹ One direct connection is the contribution of energy efficiency and renewable energy technologies towards the development of Ottawa's clean technology sector. Ottawa is home to an estimated 240 clean technology companies, and the sector is one of six high-growth "Knowledge-Based Industries" that Invest Ottawa, the City's local economic development organization, is currently working to support.

Low Carbon Cities Canada (LC3)

Recently, staff and Energy Evolution's community partners were approached by The Atmospheric Fund (TAF) (formerly the Toronto Atmospheric Fund seeking to establish innovation centres focused on lowering carbon emissions across Canada through innovation by demonstrating, de-risking, and developing local solutions.

Ottawa is one of six participating jurisdictions (including TAF), submitting a proposal to the federal Low-Carbon Economy Fund. If the proposal is accepted, each centre would receive a substantial endowment, likely in the order of \$15 to \$30 million. Via both investments (loans) and grants, the funds would directly support key, strategic opportunities in the local community, and leverage additional resources from an array of

¹ See City of Ottawa [Innovation Pilot Program](#).

other sources, including the province, private impact investors, private donors, and other foundations.

The centre would complement but *not* duplicate or compete with existing local initiatives to advance clean energy and reduce emissions. It would also target significant co-benefits -- including economic development, health, inclusion (e.g., reduced energy poverty), and energy resilience. Ottawa's centre would be networked with other local centres across the country to boost knowledge-sharing and accelerate innovation.

The Ottawa Community Foundation (OCF) is coordinating a group of about 20 contributors, with relevant expertise and connections to develop the proposal, in collaboration with TAF and the other proponents.

The proposal currently requires no commitment of City budget or staff time but does require that the City demonstrate its engagement and support should the proposal be successful. This would include endorsement of the initiative and a commitment to explore further collaboration options, including:

- An active role in governance and decision-making, to maximize alignment with Energy Evolution: Ottawa's Community Energy Transition Strategy and other GHG-reducing initiatives of the City;
- Receiving funds to grant to the centre's approved projects, for organizations where the OCF cannot directly make the grant disbursement;
- Aligning investments as appropriate opportunities arise;
- Fostering broad adoption of innovations that are proven through the centre's investments.

Staff will provide a status update once further details of the initiative have been finalized.

2017 Catalyst Projects

In 2016, Council approved a one-time funding of \$300,000 to pilot catalyst projects in 2017 that support Energy Evolution's vision and goals. Catalyst projects are initiatives led by Ottawa-based organizations that either serve as demonstration projects or lays the foundation for demonstration projects that could be scaled up in the future.

Collectively, these projects will be used to increase energy literacy, pilot emerging technologies, and/or enable innovative approaches. A total of seven projects received funding and will be completed by December 31, 2017.

Table 1 - Approved Catalyst Projects

Project Name	Lead Organization	Location	Funding Allocated
OCH Tenant Engagement Project	Ottawa Community Housing (OCH)	Ward 4 Ward 12 Ward 13 Ward 16	\$70,000
Urban Innovation Pods	prototypeD TEAM Inc.	City-Wide	\$22,000
PV Hot Water at a City of Ottawa Facility	JAZZ Solar Solutions	Ward 14	\$92,500
Ottawa Business Energy and Efficiency Profile	EnviroCentre	City-Wide	\$17,500
Ottawa EV Days	EnviroCentre	Ward 1 Ward 4 Ward 9	\$15,000
ClimateWise Retrofit Project	Canada Green Building Council (CaGBC) and Ottawa Renewable Energy Co-op (OREC)	City-wide	\$53,000

Supplemental Use of Electric Water Heating for Environmental and Cost Reduction	Hydro Ottawa Ltd	Ward 14	\$30,000
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In 2018, following the completion of the program, a summary report detailing the findings of the program will be prepared. This report will outline the achievements and benefits seen from each project, how they contributed to the goals of Energy Evolution, how they could lend themselves to being scaled up in the future, and lessons learned. Projects that could build off or complement the work completed will be considered as part of Phase 2.

Phase 1

Document 1 attached, represents Phase 1 of Energy Evolution: Ottawa's Community Energy Transition Strategy. It articulates the overall vision and approach for the strategy, provides a baseline analysis of current energy consumption across the municipality and renewable energy pathways to recognize the strategy's vision. It is a short term action plan that identifies 30+ initiatives developed by community subject matter experts and staff that can be undertaken by the City and community partners within the next three years. The Phase 1 action plan does not identify or propose specific actions for longer-term renewable energy milestones but they will be elaborated in the subsequent phase of the Energy Evolution strategy as short-term actions are implemented and as new opportunities and trends within the renewable energy sector emerge.

Eight goals were established by the Sounding Board for Energy Evolution. These goals are integral to the formation of the Phase 1 Summary of Short-Term Actions attached in Document 2. They will also be fundamental to framing Phase 2 of Energy Evolution and are as follows:

1. Help meet or exceed locally established energy reduction targets;
2. Develop local renewable energy generation opportunities;
3. Improve energy security;
4. Provide greater opportunities for residents to own or invest in local energy systems and businesses;
5. Reduce environmental impact;
6. Complement long term municipal land use, transportation and infrastructure master plans;
7. Advance economic development objectives, and
8. Bring groups together to facilitate info sharing and development of joint solutions.

Energy Evolution is intended to be a multi-year strategy with specific deliverables for the short (2020), medium (2031) and long term (2050). Phase 2 will include the

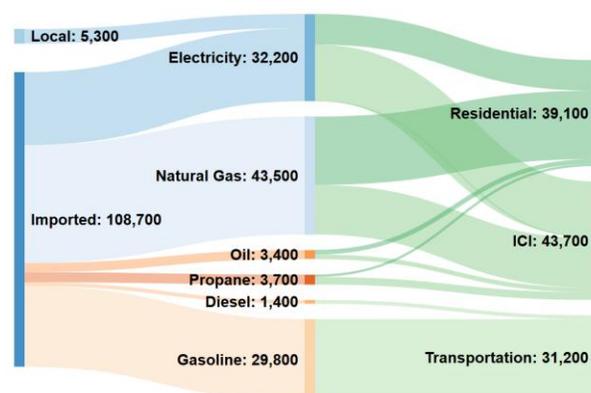
development of Pathway Studies and the identification of actions related to energy efficiency and conservation, particularly with regards to buildings and the transportation sector. It will also examine other areas associated with renewable energy such as energy from waste and energy storage.

Completion of the remaining pathway documents during Phase 2 will enable a more robust analysis that will follow and will provide the remaining inputs required to undertake more accurate long-range energy modeling and assessment. This additional analysis will help the City and its community partners determine where to prioritize efforts over the medium and long term and will help to chart a path towards a future where Ottawa is a thriving city powered by clean, renewable energy.

Energy Baseline and Renewable Energy Pathways in Ottawa

Leidos Canada was hired to develop an energy baseline of energy supply and demand for Ottawa (Document 3). Results from the baseline analysis indicate that in 2015 Ottawans consumed approximately 114,000 terajoules (TJ) of energy at a total cost of \$3.0 billion, or roughly \$3,200 per person. Natural gas was the most consumed type of energy in the city (43,500 TJ or 39 percent) followed by electricity (32,200 TJ or 28 percent) and gasoline (29,800 TJ or 26 percent). Together, these three energy types accounted for roughly 93 percent of the total energy used in Ottawa.

Despite large and well-tapped hydropower facilities located on the Ottawa River, only five percent of the city's total energy consumption is currently generated or supplied from local, renewable sources.



*Sankey diagram showing the flow of energy by supply into usage as TJ
(Source: Leidos Canada)*

A total of nine Pathway Studies were developed by Leidos Canada or staff for Phase 1 of the strategy. Each outlines the potential uptake and applications of a different renewable energy technology under different circumstances including conservative, modern and aggressive scenarios. They can be found in Document 4. The table below shows each pathway and the potential impact for renewable energy generation.

Table 2 – Energy Generation Pathway Studies

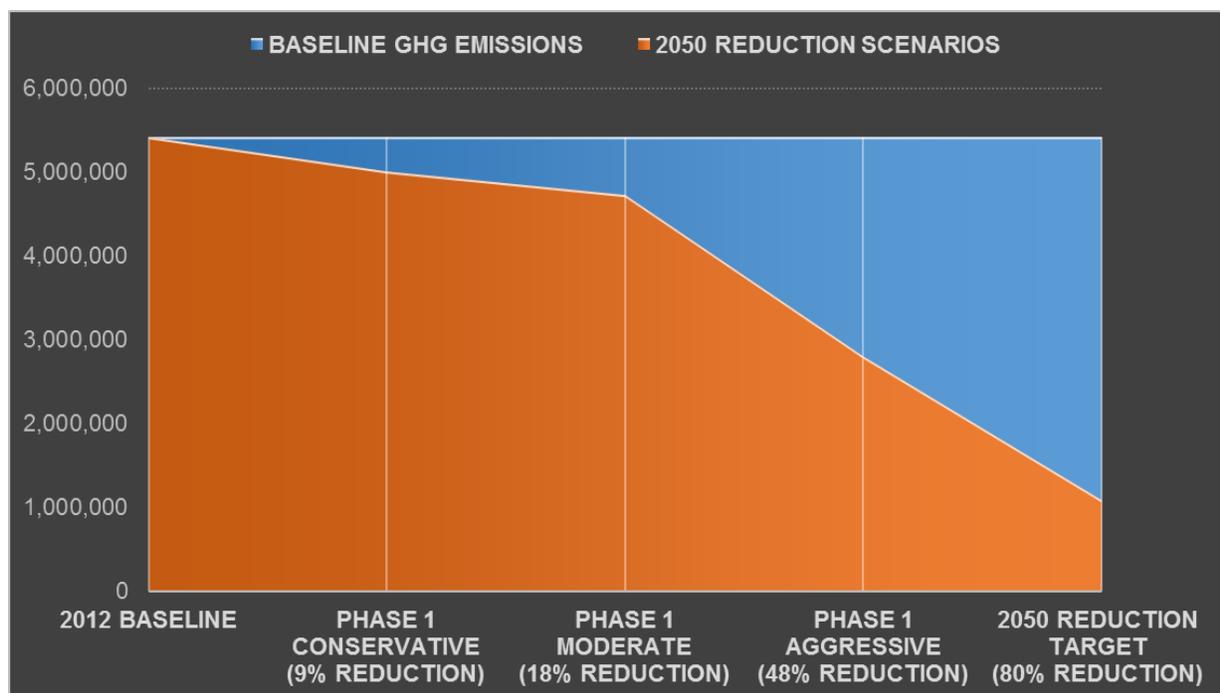
Pathway Studies	Potential Impact
Renewable Energy Generation	
Solar – Large Scale	Medium
Solar – Commercial Rooftop	Medium
Solar – Residential	Small / Medium
Waterpower	Small
Heat pumps – Air and ground source	Large
Biogas for renewable natural gas and electricity	Medium
District energy systems	Large
Wind	Small
Electrification of Transport – Light Vehicles	Large

Aggregation of the Phase 1 Pathway Studies and their various growth projections suggests that renewable energy technologies have the potential to offset approximately 48,737 TJ or nearly half (43 percent) of Ottawa's current energy consumption under an aggressive uptake scenario by 2050. Moderate uptake scenarios project a potential to offset approximately 19,998 TJ of Ottawa's current energy consumption by 2050, whereas the conservative uptake scenarios were estimated to offset 8,348 TJ or roughly 7 percent of Ottawa's current energy consumption by 2050.

As noted in the strategy, a key consideration of the Energy Evolution strategy is Council's directive to reduce community-wide GHG emissions by 80 percent below

2012 levels by 2050. Each of the potential Pathway contributions were therefore assessed in terms of their GHG reduction potential and ability to help meet the City's long-term GHG reduction target.

The graphic below shows the potential for GHG reductions using renewable energy alone in a conservative, moderate and aggressive scenario. A moderate uptake scenario in Phase 1 for example, has the potential to reduce community-wide GHG emissions by 18 percent below baseline emissions by 2050. In this scenario, the remaining 62 percent of the 2050 reduction target would need to be pursued through other means, such as energy efficiency, conservation or energy storage. In contrast, if the most aggressive uptake scenario for Phase 1 were pursued, only 32 percent of the City's baseline GHG emissions would need to be reduced through other means.



The Pathway Studies completed for Phase 1 of the Energy Evolution Strategy focus primarily on renewable energy generation opportunities. The data and scenarios projected above are therefore provisional and subject to change pending the completion of the remaining Pathway Studies on energy efficiency, conservation and energy storage (Energy Evolution Phase 2). In some cases, it may not be necessary or practical to pursue the most aggressive uptake scenarios in each of the Phase 1 Pathway Studies.

Implementation of Phase 1

The proposed Phase 1 Summary of Short-Term Actions (Document 2) were based on the above pathways and developed in five workshops attended by targeted subject matter experts. The discussion from the workshops is summarized in the *As We Heard It* report attached as Document 5.

While some of the proposed short-term actions recommended in the Phase 1 strategy require further refinement, others can be pursued over the course of 2018 and beyond using a combination of City resources, community resources and senior government funding opportunities. Of the 30+ actions identified, approximate half of them can be advanced using City resources alone, and the other half using a combination of City and community partner resources or independently. Nineteen projects can begin in 2018. Of these, nine would directly require the Energy Evolution project team to either lead or facilitate. As noted in the Document 2 chart, a number of the projects qualify for provincial, federal or FCM funding which staff will be applying for. Implementation of six of the projects cited to begin in 2019 will be contingent on acquiring additional resources, as well as some are contingent on securing external funding.

Community Energy Innovation Fund

The development of a Community Energy Innovation Fund is recommended to seed the development of viable energy efficiency opportunities and savings as well as longer term planning for Ottawa's low carbon future. Sources of investment may include dividends from Hydro Ottawa when those funds exceed estimates in the City's Long Range Financial Plan. In 2018, staff will bring a report to Council on the mandate, financing and governance of the fund, and a general structure for the program can be found in Document 6. A \$500,000 funding request was made in support of this initiative as part of the 2018 budget process and is subject to Council's approval.

NEXT STEPS

Energy Evolution going forward

Phase 2 of the Energy Evolution strategy will include the development of Pathway Studies and the identification of short-term actions related to energy efficiency and conservation, particularly with regards to buildings and the transportation sector. It will

also examine other areas associated with renewable energy such as energy from waste and energy storage. A more comprehensive energy modelling component to quantify—to the best extent possible—the potential impacts associated with different actions and approaches will also be developed.

Completion of the remaining pathway documents during Phase 2 will enable a more robust analysis and will provide the remaining inputs required to undertake more accurate long-range energy modeling. This additional modeling and analysis will help the City and its community partners determine where to prioritize efforts over the medium and long term and will help to chart a path towards a future where Ottawa is a thriving city powered by clean, renewable energy.

As with Phase I, Phase 2 of the project will include a significant engagement component with community partners in the development of the strategy. An external advisory group (10 – 12 community partners) will be established to guide the vision of the project to its completion. Targeted Sounding Board members will also be engaged for their subject matter expertise at different stages of the project. The larger Sounding Board will be provided updates as new milestones are achieved. ESAC members will be also engaged at various stages to ensure their advice and feedback is considered as the project moves forward.

RURAL IMPLICATIONS

There are good opportunities for more biogas, biomass and large scale solar energy generation facilities in Ottawa's rural area.

CONSULTATION

Energy Evolution has been developed in consultation with a broad cross-section of interested community partners. Working from the development of big ideas to developing a vision and goals, landing business cases and policy actions, and opportunities for further action, community partners have been integral to the development of Phase 1. Inputs from these stakeholders have provided a great deal of both data and engagement.

Community partners include a 100+ person Sounding Board, a Councillor Sponsors group, working groups, and members of the Environmental Stewardship Advisory Committee (ESAC) to facilitate collaboration between the municipality and community

partners. The Sounding Board consists of individuals from local utilities, the federal government, the development industry, institutions, academia, the non-profit sector, and the private sector at large. The Sounding Board was established to facilitate collaboration between various levels of government, City departments, utilities, stakeholders, and the broader community.

The working groups have included some Sounding Board members but also technical experts from farther afield. A number of consultants were also engaged to provide background information and technical analysis necessary to develop Phase I.

The working groups were originally established to facilitate discussion on specific aspects of the Plan. They included eight focus areas including visioning, communication and engagement, new buildings, existing buildings, transportation, energy supply and distribution, funding and governance.

With a focus on energy supply and distribution for Phase I, Phase 2 will re-align more closely with the building, transportation, governance and funding working groups.

Throughout Phase I of the Energy Evolution it was evident that one of the significant values of undertaking this project was the forum and match-making that enabled the collaboration and coordination for the road forward. This became particularly evident as the workshops to develop business cases and policy opportunities were being undertaken. In meeting and speaking with each other about opportunities to advance renewable energy generation and conservation, community partners also built ideas and made business contacts with each other which made their value propositions much stronger. Continuing with this format for collaboration will be very valuable for Phase 2.

As with Phase I, Phase 2 of the project will include a significant engagement component with community partners in the development of the strategy. Targeted subject matter experts including consultants will be engaged throughout for their expertise. ESAC members will also be engaged at various stages to ensure their advice and feedback is considered as the project moves forward.

COMMENTS BY THE WARD COUNCILLORS

This is a City-wide report – not applicable.

LEGAL IMPLICATIONS

There are no legal impediments to Committee and City Council's approval of the recommendations in this report.

RISK MANAGEMENT IMPLICATIONS

There are no risks associated with this report.

ASSET MANAGEMENT IMPLICATIONS

The information documented in this report is consistent with the [City's Comprehensive Asset Management \(CAM\) Program](#) objectives. Ottawa's Community Energy Transition Strategy is designed to manage energy consumption, promote the use of renewable energy and advance local economic development opportunities and assists to fulfil the City's obligation to deliver quality services to the community. As business cases are developed, their analysis recommendations will demonstrate delivery of the plans in a way that balances service levels, risk, and affordability.

FINANCIAL IMPLICATIONS

Recommendations 1, 3 and 4

There are no direct financial implications.

Recommendation 2

Financial implications associated with the Community Energy Transition Strategy Actions are per the Resource Requirements within Document 2. Actions requiring Community, External, and/or Additional Resources will not proceed prior to securing the resource(s) identified.

Funding in the amount of \$500,000 to implement Action 30 is subject to Council approval through the 2018 Capital Budget, 909151 Community Energy Initiatives.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with this report.

ENVIRONMENTAL IMPLICATIONS

This work will assist the City in moving towards a renewable energy and carbon neutral future where a GHG reduction of 80 per cent above 2012 levels by 2050 is achievable.

TERM OF COUNCIL PRIORITIES

This work aligns to the Sustainable Environmental Services (ES) Strategic Priority:

To provide sustainable environmental services that balance protection of our natural resources and support the planned growth of the city with the duty to ensure fiscal sustainability and meet legislative requirements in the delivery of municipal services.

SUPPORTING DOCUMENTATION

(Previously distributed to all Members of Council and held on file with the City Clerk and Solicitor.)

Document 1 Energy Evolution: Ottawa's Community Energy Transition Strategy, Phase I

Document 2 Summary of Short-Term Actions

Document 3 Energy Baseline for Ottawa

Document 4 Renewable Energy Pathways

Document 5 As We Heard It Report

Document 6 Community Energy Innovation Fund

DISPOSITION

Following approval by Council, staff will carry out the recommendations in this report, as appropriate.